

CLAIMS

1. A liquid crystal display device comprising:
an active matrix panel having a coloring member;
a liquid crystal having spontaneous polarization,
sealed in said active matrix panel;
a writing/erasing unit for displaying an image on a
frame by frame basis by repeating a data writing process
and a data erasing process for said active matrix panel; and
a write/erasure controller for controlling said
writing/erasing unit to have a frequency in the data writing
process at least twice higher than a frame frequency and to
complete the data writing process and the data erasing
process within one frame time so that time taken for
transmission of light through said coloring member is not
more than a half of one frame time.
2. The liquid crystal display device as set forth in
claim 1, wherein
said writing/erasure controller controls said
writing/erasing unit to perform the data writing process
and the data erasing process by using an entire one frame
time.
3. The liquid crystal display device as set forth in
claim 1, wherein

TROEGSTON 39727460

said writing/erasure controller controls said writing/erasing unit to provide within one frame time a period during which neither the data writing process nor the data erasing process is performed.

4. The liquid crystal display device as set forth in claim 1, further comprising:

a back-light for irradiating white light on said coloring member; and

a back-light controller for controlling said back-light to be turned on or off according to the data writing process and the data erasing process.

5. The liquid crystal display device as set forth in claim 2, further comprising:

a back-light for irradiating white light on said coloring member; and

a back-light controller for controlling said back-light to be turned on or off according to the data writing process and the data erasing process.

6. The liquid crystal display device as set forth in claim 3, further comprising:

a back-light for irradiating white light on said coloring member; and

2008/00396260

a back-light controller for controlling said back-light to be turned on or off according to the data writing process and the data erasing process.

7. A liquid crystal display method using a liquid crystal display device constructed by sealing a liquid crystal having spontaneous polarization in an active matrix panel including a coloring member, comprising the steps of:

displaying an image on a frame by frame basis by repeating a data writing process and a data erasing process for the active matrix panel; and

setting a frequency in the data writing process at least twice higher than a frame frequency and completing the data writing process and the data erasing process within one frame time so that time taken for transmission of light through the coloring member is not more than a half of one frame time.

8. The liquid crystal display method as set forth in claim 7, wherein

the data writing process and the data erasing process are performed using an entire one frame time.

9. The liquid crystal display method as set forth in claim 7, wherein

a period during which neither the data writing process nor the data erasing process is performed is provided within one frame time.

10. The liquid crystal display method as set forth in claim 7, wherein

white light is irradiated on the coloring member, and irradiation/non-irradiation of the white light is controlled according to the data writing process and the data erasing process.